1. Record Nr. UNINA9910739415603321

Titolo	Modulation of presynaptic calcium channels / / Gary Stephens, Sumiko Mochida, editors
Pubbl/distr/stampa	New York, : Springer, 2013
ISBN	94-007-6334-4
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (365 p.)
Altri autori (Persone)	StephensGary MochidaSumiko
Disciplina	574.872
Soggetti	Calcium channels Calcium in the body
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Spatial and temporal regulation of Ca2+ channels -- Neuronal functions of auxiliary calcium channel subunits.- Reciprocal regulation of neuronal calcium channels by synaptic proteins -- Molecular architecture of Ca2+ channel complexes organized by subunits in presynaptic active zones -- Control of CaV2 calcium channels and neurosecretion by heterotrimeric G protein coupled receptors -- Regulation of CaV2 channels by small GTPases -- Protein interaction partners of Cav2.3 R-type voltage-gated calcium channels -- Voltage-gated calcium channel signaling to the nucleus -- Presynaptic Ca2+ influx and its modulation at auditory calyceal terminals -- Use of synthetic Ca2+ channel peptides to study presynaptic function -- Impact of a loss-of-function P/Q type Ca2+ channel mutation on excitatory synaptic control of cerebellar Purkinje neurons -- CaV2.1 (P/Q) voltage activated Ca2+ channels and synaptic transmission in genetic and autoimmune diseases -- Splicing and editing to customize CaV channel structures for optimal neural function -- Presynaptic calcium channels as drug targets for pain -- Sensory pathway modulation by calcium channel a2d1 subunit.
Sommario/riassunto	This book brings together leading international experts to discuss recent advances in the regulation of presynaptic voltage-gated Ca2+ channels (VGCCs), key signal transducers that represent one of the

most widely modulated proteins in the body. It is now commonly accepted that presence of the VGCC complex defines an excitable cell. At a basic level, VGCCs transduce membrane potential change to chemical neurotransmitter release at presynaptic terminals. However, on-going scientific research, presented here, in areas including neuroscience, electrophysiology, pharmacology, biochemistry and, increasingly, proteomics, has revealed the widespread nature of modulation of the presynaptic VGCC complex. This book reviews and discusses the following topics: The fundamental role of the VGCC pore-forming CaVa subunit, and some of their binding partners, in presynaptic function and synaptic plasticity. Modulation of presynaptic CaVa subunits by auxiliary CaVb and a2d subunits and by their major interaction partners, such as active zone scaffolding proteins, synaptic proteins, G proteins and small GTPases, which, together, contribute to the VGCC proteome. Work at the cutting edge of research, including how direct electrophysiology recordings from presynaptic terminals and introduction of synthetic CaVa peptides into presynaptic terminals has expanded our knowledge of VGCC function. Evidence emerging over the last decade demonstrating that VGCC subunits represent bona fide molecular targets for therapeutic drug discovery. This development is illustrated by the introduction of the CaV2.2 blocker ziconotide, which represents an important proof-of-concept, but is best exemplified by the emergence of gabapentinoids, which bind the VGCC auxiliary a2d subunit, as first-line treatments for chronic neuropathic pain. Throughout, chapters are accompanied with illustrative Tables and Figure providing a useful and comprehensive summary of the current state-of-play in this area of significant therapeutic interest. Work described here also provides a solid basis for future research in this important area.

2. Record Nr. UNINA9910882891103321

Titolo	Arsenic Remediation of Food and Water : Technological Interventions and Perspectives from Developing Countries / / edited by Bhaskar Sen Gupta, Nadia Martínez-Villegas
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024
ISBN	9789819747641 9819747643
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (449 pages)
Disciplina	628.5
Soggetti	Environmental management Food - Safety measures Water Hydrology Biopolymers Biomaterials Environmental protection Civil engineering Bioremediation Environmental Management Food Safety Soil and Water Protection Environmental Biotechnology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	The Contamination of Water and Soil from the Dissolution of As-Bearing Mineral Waste in Matehuala, Mexico -- Arsenic Contamination in Indonesia -- Assessment of Arsenic Contamination in Groundwater in the Ayeyarwaddy Region of Myanmar: A Study by Irrigation and Water Utilization Management Department of Myanmar -- Assessing Hazards of Arsenic Leakage in Multi-Layered Aquifer System in a Part of Middle Ganga Plains, Northern India -- Systematic Review of Arsenic Contamination, Toxicity and Remediation Techniques in Malawi --

Groundwater ArsenicContamination in Karimpur-I Block, District Nadia, West-Bengal and Investigation for Safe Water -- Arsenic Contamination of Water Sources in Southern Africa: Role of Artisanal and Small Scale Mining Sector -- Source Apportionment of Heavy Metal(loid)s in the Surface Soils of Cerrito Blanco, Mexico: A Comparative Study of Three Receptor Models (APCS-MLR, PMF, and UNMIX Model) -- Polymer Nanofilm Composite Membranes for Ionic and Molecular Separation: History, Challenges and Future Perspectives -- Novel Cellulose-Based Hectocycle Nanopolymers for Arsenic Removal from Groundwater -- Investigation of Physicochemical Characteristics for Alumina Selection for Fluoride and Arsenic Removal -- Arsenic Remediation from Water in Burkina Faso Using Local Materials as Adsorbents: Overview, Mitigation and Prospects.

Sommario/riassunto

The book provides information on the sources of arsenic contamination of groundwater and their impacts in the first part of the book consisting of 8 chapters. Process developments such as nano-adsorbents for removal of arsenic and other heavy metals are discussed in the second part of the book that comprises of 4 chapters. The third part of the book includes 4 chapters on technological interventions for the removal of arsenic such as indigenous ceramic membranes and Subterranean Arsenic Removal (SAR). The fourth part of the book deals with arsenic contamination in food materials and food chain systems, and consists of 5 chapters. Arsenic has long been associated with a variety of health complications in the human body. In order to address this, a chapter on arsenic contamination and impacts on human health has been included in the fifth part of the book. The book would be a valuable reference material for the scientific community in developing countries working on community water supply and treatment, food safety, public health and policy.